



# MAS BULLETIN

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## Antisubmarine Warfare Area System

**Background.** WELSE S.p.A., Genoa, Italy has developed an Antisubmarine Warfare Area System (ASWAS) as an underwater defense system for naval bases, coastal installations, harbors, offshore platforms, straits, and sea areas.

**Description.** The ASWAS was designed as a system to operate as an "underwater gate" against possible attacks from submarines and minisubmarines.

It uses a barrier of sensors deployed on the sea bottom and linked via cable to an ashore-based control station. The system is able to interdict the access to naval bases or harbors and/or control the underwater traffic through straits and sea areas of interest.

The underwater barrier is composed of sensor units providing a double sequential detection of the underwater vehicle or submarine, based on the activation of a magnetic sensor and the subsequent triggering of an acoustic device as a confirmation. The operator on watch at the control station immediately will receive a visual and audible alarm displaying the intrusion point on the console display.

The control station is based on a single manned console performing the following tasks:

- System display reset
- Topographic visualization

- Geographic reference grids
- Isobathimetric visualization
- Sensor barriers display
- Sensor self-test display
- Alarm visualization and target ranging
- Target tracking

The control station is interfaced with a surface radar for discrimination of surface traffic in the controlled area. The ASWAS system can be easily integrated with the most advanced short range anti-swimmer and defence systems for land installations. The system can be used in depths ranging from 5 to 150 meters.

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